PDA056G340, G.2, Released, Product Marketing Specifications, Page 1 of 3, System: cmiplm.cummins.com Downloaded: 10-15-2024 03:40UTC
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Cummins Data Classification: CUMMINS INTERNAL USE ONLY

Generator set data sheet

Firmato digitalmente da:
Marco Amosso
Data: 01/08/2025 11:05:24

Model: C3000 D5e
Frequency: 50 Hz
Fuel type: Diesel
Emissions level: Tier 2

Spec sheet:	**EMERS-5867-EN**
Sound data sheet:	**MSP-1188**
Cooling data sheet (EPA Tier 2):	**MCP-2056**
EPA Tier 2 emission compliance statement:	**EPA-1259**
PTS sheet:	**PTS-323**

Fuel consumption

	Standby				Prime				Continuous			
	kVA (kW)				kVA (kW)				kVA (kW)			
Ratings	3000 (2400) †				2750 (2200)				2100 (1680)			
Load	**1/4**	**1/2**	**3/4**	**Full**	**1/4**	**1/2**	**3/4**	**Full**	**1/4**	**1/2**	**3/4**	**Full**
US gph	47.9	92.2	127.0	163.5	44.3	80.2	113.8	145.5	35.4	62.9	90.4	117.
L/hr	181	349	481	619	168	304	431	551	134	238	342	444

†DCC available at standby power subject to Cummins' site-specific assessment. Please contact your Cummins Distributor.

Engine

	Standby rating	Prime rating	Continuous ratin
Engine manufacturer	Cummins		
Engine model	QSK78-G23		
Configuration	Cast iron, 60º V18 cylinder		
Aspiration	Turbocharged and low temperature after-cooled		
Gross engine power output, kWm	2613	2304	1759
BMEP at set rated load, kPa	2696	2386	1813
Bore, mm	170		
Stroke, mm	190		
Rated speed, rpm	1500		
Piston speed, m/s	11.4		
Compression ratio	15.5:1		
Lube oil capacity, L	466		
Overspeed limit, rpm	1850 ±50		
Regenerative power, kW	266		
Governor type	Electronic		
Starting voltage	24V Volts DC		

Fuel flow

Maximum fuel flow, L/hr	2233
Maximum fuel inlet restriction, mm Hg	229
Maximum fuel inlet temperature, °C	71

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Air	Standby rating	Prime rating	Continuous ratin
Combustion air, m^3/min	201	188	164
Maximum air cleaner restriction, kPa	6.2		

Exhaust			
Exhaust gas flow at set rated load, m^3/min	480	446	385
Exhaust gas temperature, °C	457	446	428
Maximum exhaust back pressure, kPa	6.8		

Optional remote vertical radiator			
Ambient design, °C	RTF		
Fan load, kW_e	RTF		
Coolant capacity (with radiator), L	RTF		
Cooling system air flow, m^3/sec @ 12.7 mm H_2O	RTF		
Total heat rejection, Btu/min	RTF		
Maximum cooling air flow static restriction mm H_2O	RTF		

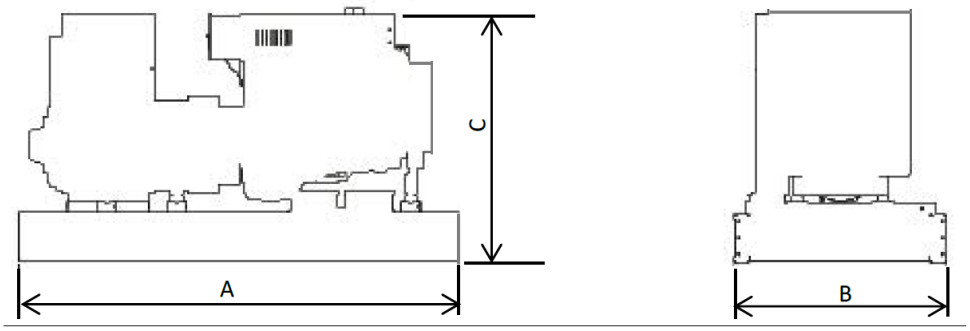
Weights*	Open
Unit dry weight kgs	20710
Unit wet weight kgs	21300

* Weights represent a set with standard features. See outline drawing for weights of other configurations.

Dimensions	Length (A)	Width (B)	Height (C)
Standard open set dimensions	5816	1963	2166

Genset outline

Open set



Outlines are for illustrative purposes only. Please refer to the genset outline drawing for an exact representation of this model.

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Alternator data

Connection	Temp rise ºC	Duty	Alternator	Voltage
Wye, 3-phase	80-150	S/P/C	LVSI804S,T,W,X	380-440
Wye, 3-phase	80-125	S/P/C	S9H1D-C,D,E,F,G,H	6300-11000

Ratings definitions

Emergency Standby Power (ESP):	Limited-Time Running Power (LTP):	Prime Power (PRP):
Applicable for supplying power to varying electrical load for the duration of power interruption of a reliable utility source. Emergency Standby Power (ESP) is in accordance with ISO 8528. Fuel Stop power in accordance with data shown above represents gross engine performance and capabilities as per ISO 3046-1, obtained and corrected in accordance with ISO 15550	Applicable for supplying power to a constant electrical load for limited hours. Limited Time Running Power (LTP) is in accordance with ISO 8528.	Applicable for supplying power to varying electrical load for unlimited hours. Prime Power (PRP) is in accordance with ISO 8528. Ten percent overload capability is available in accordance with ISO 3046-1, obtained and corrected in accordance with ISO 15550.

Formulas for calculating full load currents:

Three phase output

$$\frac{\text{kW} \times 1000}{\text{Voltage} \times 1.73 \times 0.8}$$

Single phase output

$$\frac{\text{kW} \times \text{SinglePhaseFactor} \times 1000}{\text{Voltage}}$$

For more information contact your local Cummins distributor or visit power.cummins.com

Our energy working for you.™

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EMERD-5845-EN (10/24)

Diesel Powered Generating Sets 1200 kW - 1340 kW 50 Hz KTA50 Series Engines

Standard Genset Features

Single Source Responsibility
- Design, manufacturer and test of all components and accessories are made by Cummins Power Generation and Cummins companies

International Integrity
- Assurance and strength of a worldwide, world class corporation

Global Backing
- 24-hoursparesandservicesupport– in 72 countries

Single Source Warranty
- Complete genset covered by Cummins Power Generation comprehensive warranty

Packaged Self-Contained Units
- Units with built in antivibration systems with provision for base fuel tank and other accessories

Cummins Engine
- Heavy duty 4 cycle water cooled engine
  Electronic governor control

Alternator
- Brushless Group made machine
- Close voltage regulation
- Rotor and exciter impregnated with oil and acid resisting resin
- 6 lead reconnectable
- Exceptional short circuit capability
- Low waveform distortion with non linear loads
- Permanent magnet exciter fitted as standard

Ratings
All kW Power ratings based on a 40°C ambient temperature reference.

Chasis
Built-in anti-vibration system
Bonded rubber units fitted as standard eliminates need for rubber mats or spring mountings

Cooling System
- 40°Ccoolingpackage(50°Coption)

Ready Filled
- Every set comes filled with lube oil and anti-freeze

PCC PowerCommand® Control System
- PCC2100 Controller with bar graph as standard
- Microprocessor control
- Integrates governor and voltage regulation systems
- Superior alternator and genset protection system
- Accurate battery monitoring system
- Totally reliable and proven system

Quality Assurance
Registered Firm Certificate Number FM509 in accordance with:
BS EN ISO 9001
Quality Assurance Schedule 3420/1

One Source — Alternator — Controls — Generating Set — Engine — One Name

Cummins Power Generation, Cummins Engines and Newage Alternators are all part of the same group

50 Hz Ratings			
Model Prime	Prime kW (kVA)	Standby kW (kVA)	Engine Model
C1675 D5A	1200 (1500)	1340 (1675)	KTA50GS8

A Single Source for *all* Power System Solutions

Specifications May Change Without Notice

Specifications

Generator Set Performance

Voltage Regulation
Maintains voltage output to within ±0.5%.
At any power factor between 0.8 lagging and unity.
At any variations from No load to Full load.
At any variations from Cold to Hot.
At speed droop variations up to 4.5%.

Frequency Regulation
Isochronous under varying loads from no load to 100% full load.

Random Frequency Variation
Will not exceed ±0.25% of its mean value for constant loads – no load to full load.

Waveform
Total harmonic distortion open circuit voltage waveform in the order of 1.5%. Three-phase balanced load in the order of 5.0%.

Telephone Influence Factor
TIF better than 50.
THF to BS4999 Part 40 better than 2%.

Alternator Temperature Rise
Class H insulation. Temperature rise up to 125°C permitted for prime ratings.

Radio Interference
In compliance with BS800 and VDE levels G and N.

Engine

Cummins KTA50GS8
sixteen-cylinder vee formation, direct injection, four-cycle diesel engines.

Type
Water cooled, turbocharged and aftercooled.

Construction
Four valves per cylinder, forged steel crankshaft and connecting rods, cast iron block, with replaceable wet liners.

Starting
24 volt negative earth, battery charging 35amp alternator. Cranking current 1800 amps Amps at 0°C.

Fuel System
24 volt fail safe actuator, dual spin-on paper element fuel filters, Cummins PTfuel injection systems with integral electronic governor. Dual flexible fuel lines with connectors. Standard fuel water separator.

Filters
Dry element air filters with restriction indicator and spin-on paper element full flow and by pass lube oil filters. Spin on corrosion resistor filter.

Cooling
High ambient 40°C radiator as standard with 50°C ambient as option. Oil cooler.

Alternator

Type
Brushless, single bearing, revolving field, 4-pole, drip proof, screen protected.
Class H insulation.
Enclosed to IP23 (NEMA1) standard.
IC 01 cooling system.
Fully interconnected damper winding.
AC exciter and rotating rectifier unit.
Epoxy coated stator winding.
Rotor and exciter impregnated with tropical grade insulating oil and acid resisting polyester resin. Dynamically balanced rotor to BS5625 grade 2.5.
Sealed for life bearings.
Layer wound mechanically wedged rotor.

Exciter
Triple dipped in moisture, oil and acid resisting polyester varnish and coated with anti-tracking varnish.
Sealed solid state automatic voltage regulator – self-exciting, self-regulating.
Output windings with 2/3 pitch for improved harmonics and parallelling ability.
Close coupled engine/alternator for perfect alignment.
Permanent magnet exciter fitted as standard.

Compliance Standard

To BS4999/5000 pt 99,
VDE 0530, UTE5100,
NEMAMG1-22, CEMA,
IEC 34, CSAA22.2,
AS1359, BSS5514,
ISO 3046 and ISO 8528

Chasis

Fabricated and welded steel chassis
Built-in anti-vibration mountings
Optional sub-base fuel tank with eight hour capacity, dual flexible fuel lines, dial type fuel gauge and drain bung

Finish
Etch undercoated and finished in high gloss durable green

General
Complete set of operating and instruction manuals

Generator Set Options

Engine
- ☐ Heavy duty air cleaner
- ☐ Coolant heater and thermostat
- ☐ Lead acid batteries, cable and fitted tray
- ☐ Sump drain pump
- ☐ Oil and water drain taps
- ☐ CE Compliance (guarding)
- ☐ Exhaust temperature monitoring - (PCCP3100 only)
- ☐ Tool kit

Cooling
- ☐ 50°C ambient radiator
- ☐ Remote radiator cooling (built to order)
- ☐ Oil temperature indication

Alternator
- ☐ Anti-Condensation heater
- ☐ Thermistors
- ☐ 125/105/80°C rise alternator

Exhaust System
- ☐ Industrial type silencer
- ☐ Residential type silencer
- ☐ Length of flexible exhaust and bellows

Fuel System
- ☐ Sub-base tanks
- ☐ Hand fuel transfer pump
- ☐ Automatic fuel transfer pump
- ☐ Free-standing 450, 900 and 1350 litre
- ☐ fuel tanks with stand
- ☐ Fuel tank level switch
- ☐ High fuel level warning
- ☐ Low fuel level warning
- ☐ Low fuel level shutdown

Generator Set
- ☐ Enclosed - 40 ft container
- ☐ Silenced enclosures

Control Panel
- ☐ See separate list on ControlPanel pages
- ☐ 3 or 4 pole circuit breaker up to 2500A
- ☐ Battery charger 5 amp or 10 amp
- ☐ CE Compliance and PCC systems
- ☐ Cable entrance box
- ☐ PCCP3100 controller

Technical Data

Set output	380-440 V - 50 Hz
Prime Rating	1200 kWe 1500 kVA
Model Name	C1675 D5A
Standby Rating	1340 kWe 1675 kVA
Engine Make	Cummins
Model	KTA50GS8
Cylinders	Sixteen
Engine build	60°Vee
Governor / Class	Electronic / A1
Aspiration and cooling	Turbo Aftercooled
Bore and stroke	159 mm x 159 mm
Compression ratio	14.9:1
Cubic capacity	50.3 Litres
Starting / Min °C	Unaided / 7°C
Battery capacity	254 A/hr
Gross Engine output – Prime	1287 kWm
Gross Engine outputl – Standby	1429 kWm
Maximum load acceptance – single step (cold)	744 kWe
Speed	1500 rpm
Alternator voltage regulation	±0.5%
Alternator insulation class	H
Single load step to NFPA110	100%
Fuel consumption (Prime) 100% load	309 l/hr
Fuel consumption (Standby) 100% load	345 l/hr
Lubrication oil system capacity	204 Litres
Base fuel tank capacity – open set (Option)	2000 Litres
Coolant capacity – radiator and engine	315 Litres
Exhaust temp – full load prime	499°C
Exhaust gas flow – full load prime	14537 m3/hr
Exhaust gas back pressure max (standby)	51 mm Hg
Air flow – radiator (40°C ambient)	21.7 m3/s
Pusher fan head (duct allowance) 40°C	13 mm Wg
Air intake – engine (prime)	5692 m3/hr
Air flow – radiator (50°C ambient)	28.4 m3/s
Pusher fan head (duct allowance) 50°C	13 mm Wg
Heat radiated by engine to ambient (Prime)	299 kW
Engine derating – altitude	RTF
Engine derating – temperature	RTF

PRIME POWER RATING

Applicable for supplying power continuously for the duration during the period of the power outage. A 10% overload capability is available for a period of 1 hour within a 12 hour period of operation and for a maximum of 5 hours per year. Variable load should not exceed a 70% average of the Prime Power rating during any 24 hour period. This rating is applicable to installations served by a reliable normal utility source. No sustained utility parallel operation is permitted with this rating.

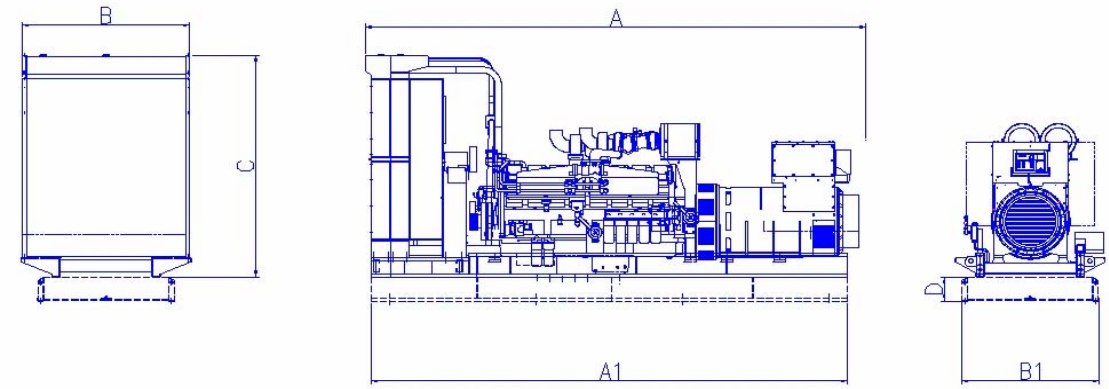
STANDBY POWER RATING (ESP)

The Standby Power Rating is applicable for supplying emergency power for the duration of a utility power interruption. No overload, utility parallel or negotiated outage operation capability is available at this rating. In installations served by unreliable utility sources (where outages last longer or occur more frequently), where operation is likely to exceed 200 hours per year, the prime power rating should be applied. The Standby Power rating is only applicable for emergency and standby applications where the generator set serves as the back up to the normal utility source.

Unless otherwise stated all ratings are based on the following reference conditions:

- Ambient temperature – 27oC
- Altitude above sea level – 150 metres
- Relative humidity – 60%

Dimensions and Weights - 50 Hz



ambient temperature reference.

Model	Engine	and Weights (mm/kg)						Set Weight kg Dry	Set Weight kg Wet
		A	A1	B1	B	C	D		
C1675 D5A	KTA50GS8	5811	5690	1640	1785	2241	300	10324	10626

Set weights are **without** sub-base tank.
Dimensions and weights are for **guidance** only.Do not use for installation design. Ask for certified drawings on your specific application.
Specifications may change without notice.

See your distributor for more information

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